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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/709,774

DATE: 05/06/2002 P.6

TIME: 09:30:42

Input Set : A:\-62-4.app

Output Set: N:\CRF3\05062002\I709774.raw

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3 <110> APPLICANT: Sette, Alessandro
4   Gaeta, Federico
5   Grey, Howard M.
6   Sidney, John
7   Alexander, Jeffery L.
8   Epimmune Inc.
10 <120> TITLE OF INVENTION: Alteration of Immune Response Using Pan DR-Binding
11   Peptides
13 <130> FILE REFERENCE: 018623-006240US
15 <140> CURRENT APPLICATION NUMBER: US 09/709,774
16 <141> CURRENT FILING DATE: 2000-11-08
18 <150> PRIOR APPLICATION NUMBER: US 08/121,101
19 <151> PRIOR FILING DATE: 1993-09-14
21 <150> PRIOR APPLICATION NUMBER: US 08/305,871
22 <151> PRIOR FILING DATE: 1994-09-14
24 <150> PRIOR APPLICATION NUMBER: US 60/010,510
25 <151> PRIOR FILING DATE: 1996-01-24
27 <150> PRIOR APPLICATION NUMBER: US 08/788,822
28 <151> PRIOR FILING DATE: 1997-01-23
30 <160> NUMBER OF SEQ ID NOS: 22
32 <170> SOFTWARE: PatentIn Ver. 2.1
34 <210> SEQ ID NO: 1
35 <211> LENGTH: 13
36 <212> TYPE: PRT
37 <213> ORGANISM: Artificial Sequence
39 <220> FEATURE:
40 <223> OTHER INFORMATION: Description of Artificial Sequence:HA 307-319
42 <400> SEQUENCE: 1
43 Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr
44   1           5           10
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48 <211> LENGTH: 24
49 <212> TYPE: PRT
50 <213> ORGANISM: Artificial Sequence
52 <220> FEATURE:
53 <223> OTHER INFORMATION: Description of Artificial Sequence:MBP 78-101
55 <400> SEQUENCE: 2
56 Gly Arg Thr Gln Asp Glu Asn Pro Val Trp His Phe Phe Lys Asn Ile
57   1           5           10           15
59 Val Thr Pro Arg Thr Pro Pro Pro
60           20
63 <210> SEQ ID NO: 3
64 <211> LENGTH: 12

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65 <212> TYPE: PRT
66 <213> ORGANISM: Artificial Sequence
68 <220> FEATURE:
69 <223> OTHER INFORMATION: Description of Artificial Sequence:MT 65 kd 3-13
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72 Tyr Lys Thr Ile Ala Phe Asp Glu Glu Ala Arg Arg
73   1           5           10
76 <210> SEQ ID NO: 4
77 <211> LENGTH: 14
78 <212> TYPE: PRT
79 <213> ORGANISM: Artificial Sequence
81 <220> FEATURE:
82 <223> OTHER INFORMATION: Description of Artificial Sequence:717.01
83   combinatorial
85 <400> SEQUENCE: 4
86 Tyr Ala Arg Phe Gln Ser Gln Thr Thr Leu Lys Gln Lys Thr
87   1           5           10
90 <210> SEQ ID NO: 5
91 <211> LENGTH: 14
92 <212> TYPE: PRT
93 <213> ORGANISM: Artificial Sequence
95 <220> FEATURE:
96 <223> OTHER INFORMATION: Description of Artificial Sequence:Tet Tox 830-843
98 <400> SEQUENCE: 5
99 Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
100  1           5           10
103 <210> SEQ ID NO: 6
104 <211> LENGTH: 13
105 <212> TYPE: PRT
106 <213> ORGANISM: Artificial Sequence
108 <220> FEATURE:
109 <223> OTHER INFORMATION: Description of Artificial Sequence:Tet Tox
110   1272-1284
112 <400> SEQUENCE: 6
113 Asn Gly Gln Ile Gly Asn Asp Pro Asn Arg Asp Ile Leu
114  1           5           10
117 <210> SEQ ID NO: 7
118 <211> LENGTH: 17
119 <212> TYPE: PRT
120 <213> ORGANISM: Artificial Sequence
122 <220> FEATURE:
123 <223> OTHER INFORMATION: Description of Artificial Sequence:RQIV
125 <400> SEQUENCE: 7
126 Tyr Ala His Ala Ala His Ala Ala His Ala Ala His Ala
127  1           5           10           15
129 Ala
133 <210> SEQ ID NO: 8
134 <211> LENGTH: 14
135 <212> TYPE: PRT

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136 <213> ORGANISM: Artificial Sequence
138 <220> FEATURE:
139 <223> OTHER INFORMATION: Description of Artificial Sequence:Ova 323-336
141 <400> SEQUENCE: 8
142 Ile Ser Gln Ala Val His Ala Ala His Ala Glu Ile Asn Glu
143   1           5           10
146 <210> SEQ ID NO: 9
147 <211> LENGTH: 16
148 <212> TYPE: PRT
149 <213> ORGANISM: Artificial Sequence
151 <220> FEATURE:
152 <223> OTHER INFORMATION: Description of Artificial Sequence:lambda rep
153   12-26
155 <400> SEQUENCE: 9
156 Tyr Leu Glu Asp Ala Arg Arg Leu Lys Ala Ile Tyr Glu Lys Lys Lys
157   1           5           10           15
160 <210> SEQ ID NO: 10
161 <211> LENGTH: 17
162 <212> TYPE: PRT
163 <213> ORGANISM: Artificial Sequence
165 <220> FEATURE:
166 <223> OTHER INFORMATION: Description of Artificial Sequence:HEL 46-61
168 <400> SEQUENCE: 10
169 Tyr Asn Thr Asp Gly Ser Thr Asp Tyr Gly Ile Leu Gln Ile Asn Ser
170   1           5           10           15
172 Arg
176 <210> SEQ ID NO: 11
177 <211> LENGTH: 20
178 <212> TYPE: PRT
179 <213> ORGANISM: Artificial Sequence
181 <220> FEATURE:
182 <223> OTHER INFORMATION: Description of Artificial Sequence:HBVnc 50-69
184 <400> SEQUENCE: 11
185 Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu
186   1           5           10           15
188 Met Thr Leu Ala
189           20
192 <210> SEQ ID NO: 12
193 <211> LENGTH: 21
194 <212> TYPE: PRT
195 <213> ORGANISM: Artificial Sequence
197 <220> FEATURE:
198 <223> OTHER INFORMATION: Description of Artificial Sequence:CS 378-398
200 <400> SEQUENCE: 12
201 Asp Ile Phe Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser Val Phe
202   1           5           10           15
204 Asn Val Val Asn Arg
205           20
208 <210> SEQ ID NO: 13

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209 <211> LENGTH: 16
210 <212> TYPE: PRT
211 <213> ORGANISM: Artificial Sequence
213 <220> FEATURE:
214 <223> OTHER INFORMATION: Description of Artificial Sequence:MT (Y)17-31
216 <400> SEQUENCE: 13
217 Tyr Ser Gly Pro Leu Lys Ala Glu Ile Ala Gln Arg Leu Glu Asp Val
218   1           5           10           15
221 <210> SEQ ID NO: 14
222 <211> LENGTH: 13
223 <212> TYPE: PRT
224 <213> ORGANISM: Artificial Sequence
226 <220> FEATURE:
227 <223> OTHER INFORMATION: Description of Artificial Sequence:HBVc 128-140
229 <400> SEQUENCE: 14
230 Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu
231   1           5           10
234 <210> SEQ ID NO: 15
235 <211> LENGTH: 13
236 <212> TYPE: PRT
237 <213> ORGANISM: Artificial Sequence
239 <220> FEATURE:
240 <223> OTHER INFORMATION: Description of Artificial Sequence:PLP 139-151
242 <400> SEQUENCE: 15
243 His Ser Leu Gly Lys Trp Leu Gly His Pro Asp Lys Phe
244   1           5           10
247 <210> SEQ ID NO: 16
248 <211> LENGTH: 4
249 <212> TYPE: PRT
250 <213> ORGANISM: Artificial Sequence
252 <220> FEATURE:
253 <223> OTHER INFORMATION: Description of Artificial Sequence:R-4 in pan DR
254   binding peptide formula
256 <400> SEQUENCE: 16
257 Trp Thr Leu Lys
258   1
261 <210> SEQ ID NO: 17
262 <211> LENGTH: 11
263 <212> TYPE: PRT
264 <213> ORGANISM: Artificial Sequence
266 <220> FEATURE:
267 <223> OTHER INFORMATION: Description of Artificial Sequence:pan DR binding
268   peptide
270 <220> FEATURE:
271 <221> NAME/KEY: MOD_RES
272 <222> LOCATION: (1)
273 <223> OTHER INFORMATION: Xaa = Ala or Lys
275 <220> FEATURE:
276 <221> NAME/KEY: MOD_RES

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Input Set : A:\-62-4.app

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277 <222> LOCATION: (2)
278 <223> OTHER INFORMATION: Xaa = Tyr or Phe
280 <220> FEATURE:
281 <221> NAME/KEY: MOD_RES
282 <222> LOCATION: (3)..(5)
283 <223> OTHER INFORMATION: Xaa = Ala, Ile, Ser, Glu or Val
285 <220> FEATURE:
286 <221> NAME/KEY: MOD_RES
287 <222> LOCATION: (10)..(11)
288 <223> OTHER INFORMATION: Xaa = Ala, Ser or Val
290 <400> SEQUENCE: 17
W--> 291 Xaa Xaa Xaa Xaa Xaa Trp Thr Leu Lys Xaa Xaa
      292   1           5           10
295 <210> SEQ ID NO: 18
296 <211> LENGTH: 12
297 <212> TYPE: PRT
298 <213> ORGANISM: Artificial Sequence
300 <220> FEATURE:
301 <223> OTHER INFORMATION: Description of Artificial Sequence:pan DR binding
302 peptide
304 <220> FEATURE:
305 <221> NAME/KEY: MOD_RES
306 <222> LOCATION: (1)
307 <223> OTHER INFORMATION: Xaa = Ala or Lys
309 <220> FEATURE:
310 <221> NAME/KEY: MOD_RES
311 <222> LOCATION: (2)
312 <223> OTHER INFORMATION: Xaa = Tyr or Phe
314 <220> FEATURE:
315 <221> NAME/KEY: MOD_RES
316 <222> LOCATION: (3)..(5)
317 <223> OTHER INFORMATION: Xaa = Ala, Ile, Ser, Glu or Val
319 <220> FEATURE:
320 <221> NAME/KEY: MOD_RES
321 <222> LOCATION: (10)..(12)
322 <223> OTHER INFORMATION: Xaa = Ala, Ser or Val
324 <400> SEQUENCE: 18
W--> 325 Xaa Xaa Xaa Xaa Xaa Trp Thr Leu Lys Xaa Xaa Xaa
      326   1           5           10
329 <210> SEQ ID NO: 19
330 <211> LENGTH: 13
331 <212> TYPE: PRT
332 <213> ORGANISM: Artificial Sequence
334 <220> FEATURE:
335 <223> OTHER INFORMATION: Description of Artificial Sequence:pan DR binding
336 peptide
338 <220> FEATURE:
339 <221> NAME/KEY: MOD_RES
340 <222> LOCATION: (1)

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/709,774

DATE: 05/06/2002
TIME: 09:30:43

Input Set : A:\-62-4.app
Output Set: N:\CRF3\05062002\I709774.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:17; Xaa Pos. 1,2,3,4,5,10,11
Seq#:18; Xaa Pos. 1,2,3,4,5,10,11,12
Seq#:19; Xaa Pos. 1,2,3,4,5,10,11,12,13
Seq#:20; Xaa Pos. 1,2,3,4,5,6,11,12
Seq#:21; Xaa Pos. 1,2,3,4,5,6,11,12,13
Seq#:22; Xaa Pos. 1,2,3,4,5,6,11,12,13,14

VERIFICATION SUMMARY

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PATENT APPLICATION: US/09/709,774

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Input Set : A:\-62-4.app

Output Set: N:\CRF3\05062002\I709774.raw

L:291 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
L:325 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0
L:359 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0
L:393 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0
L:427 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0
L:461 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0